



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,662	04/27/2001	Renato Caretta	07040.0086	7708

22852 7590 05/12/2004

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,662

Applicant(s)

CARETTA, RENATO

Examiner

Geoffrey L. Knable

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 59-116 is/are pending in the application.
- 4a) Of the above claim(s) 68-71, 75-87, 97-100 and 104-116 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 59-67, 72-74, 88-96 and 101-103 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8-15-01; 10-14-03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1733

1. Applicant's election with traverse of group I, species A (figs. 11-14) (claims 59-67, 72-74, 88-96 and 101-103) in Paper No. 3-1-2004 is acknowledged. The traversal is on the ground(s) that the search and examination can be conducted without serious burden. This is not found persuasive because the fact that the tire could be made by other processes, as indicated in the restriction requirement, as well as the different search/considerations involved in examining process and tire claims, provides sufficient evidence that the search and examination of both in the same application would present a serious burden. With respect to the species election, however, it is agreed that upon allowance of a generic claim, consideration of all claims dependent thereon or including all the limitations thereof, would be appropriate.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 68-71, 75-87, 97-100 and 104-116 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 3-1-2004.

3. Claims 59-67, 72-74, 88-96 and 101-103 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The last four lines of claim 59 define that the carcass ply and each first annular insert "abut against each other along either: a whole surface extension of the first annular

Art Unit: 1733

inserts; or a whole radial extension of the end flaps.” It is first pointed out that there does not appear to be any explicit literal basis for this requirement in the original disclosure. Support therefore is apparently being derived from the drawings. To accurately assess whether this new claim language is in fact described by the original disclosure, the scope and content of the claim must be able to be accurately assessed - it is noted however that it is not entirely clear what is contemplated by the reference to “carcass ply” in these lines, it being noted that the end flaps are part of the carcass ply. In other words, is this reference to the carcass ply and insert abutting in reference to the main part of the carcass ply (i.e. excluding the end flaps) or does this read on abutment with the end flaps? It will be assumed for purposes of assessing the new matter issues that this reference to the carcass ply is actually in reference to the main part of the carcass ply rather than the end flaps - this issue will however be raised below in the context of a 35 USC 112, second paragraph rejection.

Reading the reference to carcass ply as not being in reference to the end flaps, it would be agreed that the original disclosure does depict/describe the carcass ply abutting the whole surface extension of the first annular inserts. It however is not considered that the original disclosure describes this abutment along a “whole radial extension of the end flaps,” and therefore it is considered that this was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is new matter. In particular, note that the original disclosure never characterizes the invention in terms of the carcass and insert abutting relative to a whole

Art Unit: 1733

radial extension of the end flaps. Rather, the end flaps are described as completely covering the first insert (original claim 4) or the first inserts are described as projecting beyond one end of an end flap (original claim 10). The invention was however never characterized in terms of an extent of abutment relative to the radial extension of the end flaps. This would seem to therefore recharacterize the invention in a manner that was not reasonably described in the original disclosure, i.e. was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The last two lines of claim 88 define that each first and second insert "exhibits a radially-elongated transverse section outline." As above, it is first pointed out that there does not appear to be any explicit literal basis for this requirement in the original disclosure. Support therefore is apparently being derived from the drawings. To accurately assess whether this new claim language is in fact described by the original disclosure, the scope and content of the claim must be able to be accurately assessed - it is noted however that it is not entirely clear what is contemplated by the reference to a "radially-elongated transverse section" in these lines. In other words, the scope and content of this requirement cannot be readily ascertained as it is not entirely clear if this is intended to define simply that the insert has some radial extension or dimension or is this intended to define the radial extent relative to some other dimension of the element. This is particularly complicated by the fact that the element does not extend purely in the radial direction - this issue will also be raised below in the context of a 35 USC 112,

Art Unit: 1733

second paragraph rejection. Regardless of the interpretation, however, because the original disclosure did not characterize the inserts as "radially elongated", it does not appear that this was described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter.

4. Claims 59-67, 72-74, 88-96 and 101-103 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The last four lines of claim 59 define that the carcass ply and each first annular insert "abut against each other along either: a whole surface extension of the first annular inserts; or a whole radial extension of the end flaps." As noted above, it is not entirely clear what is contemplated by the reference to "carcass ply" in these lines, it being noted that the end flaps are part of the carcass ply. In other words, is this reference to the carcass ply and insert abutting in reference to the main part of the carcass ply (i.e. excluding the end flaps) or does this read on abutment with the end flaps? In light of this ambiguity, the scope of the referenced extent of abutment cannot be readily ascertained.

The last two lines of claim 88 define that each first and second insert "exhibits a radially-elongated transverse section outline." As noted above, it is not entirely clear what is contemplated by the reference to a "radially-elongated transverse section" in these lines. In other words, the scope and content of this requirement cannot be readily ascertained as it is not entirely clear if this is intended to define simply that the insert has some radial extension or dimension (i.e. it is not clear if defining an element as "radially

Art Unit: 1733

elongated" should be read as in any way describing whether the element is not elongated in some other direction) or is this intended to define the radial extent relative to some other dimension of the element. This is particularly complicated by the fact that the element does not extend purely in the radial direction as well as the lack of any explicit antecedent for this language in the original disclosure.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 59, 62, 64, 88, 91 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2,055,988 to Dunlop.

FR '988 to Dunlop clearly discloses a tire including a carcass (2 in fig. 2) and a pair of annular reinforcing structures (6, 7 in fig. 2) with the carcass turn-up or "end flaps" interposed therebetween. It is noted in particular that page 4, line 17 defines (by internet translation) that the layers 6/7 may overlap one another and thus the end flaps can be reasonably termed as axially interposed between the inserts 6/7 as claimed. Further, the ply 6 is depicted as extending along/abutting the carcass main portion along its entire extent and further can be described as radially elongated. This reference is therefore considered to teach each of the requirements of claims 59 and 88 except that there does not appear to be an explicit description of a belt structure. It however would have been obvious for the artisan to include a belt structure for a radial tire as in fig. 2, such being *extremely* common, well known and typical - the advantages of such would further have

Art Unit: 1733

been readily apparent to the ordinary artisan. As to claims 62 and 91, the end flaps clearly completely cover the insert "6" in fig. 2. As to claims 64 and 93, the insert "7" clearly extends beyond an outer edge of insert "6" in fig. 2.

7. Claims 59, 62, 64, 65, 88, 91, 93 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 467277 to Bridgestone/Firestone.

EP '277 clearly discloses building a tire including a carcass (16) and a pair of annular reinforcing structures (102, 104 in fig. 7A) with the carcass turn-up or "end flaps" (20) axially interposed therebetween (note esp. col. 8, lines 24-29). The wires (106, 108) of these beads are considered to clearly be in the form of concentric coils as claimed. Further, the bead 102 is depicted as extending along/abutting the carcass main portion along its entire extent and further can be described as radially elongated (e.g. note esp. that it is four wires high but only three wires wide). This reference is therefore considered to teach a tire meeting each of the requirements of claims 59 and 88 except that there is no explicit description of the rest of the tire structure and thus there is no explicit description of a tread, belt and sidewalls as claimed. It however would have been obvious for the artisan to include a belt/tread/sidewalls in the final tire, such being *extremely* common, well known and typical tire components in this art. As to claims 62 and 91, the end flaps clearly complete cover the bead 102. As to claims 64 and 93, the bead 104 clearly extends radially beyond an outer edge of bead 102. As to claims 65 and 94, the bead 102 includes axially side-by-side coils.

8. Claims 59-67, 72, 88-96 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakeford et al. (US 3,044,523).

Art Unit: 1733

Drakeford clearly discloses a tire including a carcass (23 in fig. 4) and a pair of annular reinforcing structures/inserts (21, 25 in fig. 4) with the carcass turn-up or "end flaps" axially interposed therebetween. The wires of the beads are annular and share the same center and therefore are considered to be in the form of concentric coils as claimed. Further, the bead 21 is depicted as extending along/abutting the carcass main portion along its entire extent and further can be described as radially elongated (e.g. note that it has a radial extent; further, it is also depicted as seven wires high but only six wires wide). This reference is therefore considered to teach a tire meeting each of the requirements of claims 59 and 88 except that there is no explicit description of the rest of the tire structure and thus there is no explicit description of a tread, belt and sidewalls as claimed. It however would have been obvious for the artisan to include a belt/tread/sidewalls in the final tire, such being *extremely* common, well known and typical tire components in this art. As to claims 60 and 89, either of rubber layers 22 and 27 can be considered to be a filling body of elastomer, both being in contact with at least one of the inserts 21, 25. As to claims 61 and 90, reading layer 27 as the filling body of rubber satisfies this claim as the second insert 25 is interposed between the layer 27 and the end flap. As to claims 62 and 91, the end flaps clearly completely cover the bead. As to claims 63 and 92, the insert 25 clearly extends beyond the end flap. As to claims 64 and 93, the insert 25 extends beyond the first insert (i.e. bead 21). As to claims 65 and 94, the first insert (i.e. bead 21) as depicted includes axially side-by-side coils. As to claims 66 and 95, Drakeford et al. discloses forming a filler reinforcement in the form of coiled cord in several layers, the different layers having different heights in order to

Art Unit: 1733

provide a gradual reduction in stiffness - note esp. fig. 2 and col. 2, lines 12-20. Further, this filler reinforcement may be formed as an extension of the coiled bead wire - note col. 2, lines 69-72. Although this "filler reinforcement" is not described explicitly in combination with the "chafer reinforcement" shown in fig. 4, the two reinforcements are described as separate and distinct elements, it being considered to have been obvious to combine filler reinforcement (e.g. as in fig. 2) with the chafer reinforcements (e.g. as in fig. 4) to achieve the various process/product benefits set forth in the patent for each. In such case, this would suggest different height coils for the first insert as required by claims 66 and 95. As to claims 67 and 96, it similarly is considered to have been obvious to combine a filler reinforcement (18) as in fig. 3 with a chafer as in fig. 4 to again achieve the described benefits for each type of reinforcement - reading the bead (14) as part of this winding (note again that the filler reinforcement and bead can be integrally wound), then the bead wires contact the end flaps while the higher winding 18 contact the carcass as required by claims 67 and 96. As to claims 72 and 101, note filler 22.

9. Claims 73, 74, 102, and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2,055,988 to Dunlop or EP 467277 to Bridgestone/Firestone or Drakeford et al. (US 3,044,523) as applied to claims 59 and 88 above, and further in view of Alderfer (US 3,826,297), Christman (US 4,248,287) and Frazier (US 3,240,250).

Each of the primary references discloses a radial carcass but does not show this carcass formed from strips overlapped in the sides. Alderfer (note esp. strips 11) and Christman (note esp. fig. 9) provide evidence that in this art one suitable and effective manner of forming a radial tire carcass is to use individual strips that are applied to a


Art Unit: 1733

drum. Christman further indicates that the strips overlap in converging manner in the sides, this providing strengthened bead portions and extended tire life - note esp. col. 5, lines 16-30. Frazier provides additional evidence that the ordinary artisan would have appreciated that using strips for the carcass with converging overlap down the sides avoids the problem of the typical loss of cord count at the crown while enhancing bead/sidewall reinforcement - note esp. col.1, lines 57-69 and col. 3, lines 8-24. In light of these teachings, it is submitted that the artisan would have found it to have been obvious to form the radial carcass in any of the primary references from plural strips with converging overlap down the sides with an expectation of providing enhanced sidewall/bead strength while also avoiding lowered cord counts at the crown.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
May 8, 2004